



# ELECTRICAL CURRENTS

Newsletter from the Office of the Chief Electrical Inspector

Ron Fuller, Chief Electrical Inspector

Vol. 9 No. 5

May 2006

## ● Electrical Corrections Initiative

When corrections are issued, contractors and L&I incur significant costs. Their ability to provide efficient and effective customer service is inhibited by having to go back and make and inspect corrections.

To help correct this situation, L&I is preparing to implement an initiative to better track and reduce the number of corrections received by customers. L&I will begin using a new addition to inspectors' mobile computing system on June 2<sup>nd</sup>. Inspectors will be using their computers and printers, in the field, to write and record all corrections. All customers will be able to view the corrections online using the L&I website tool for viewing inspection activity.

As a part of this initiative, L&I will be able to track correction data across the state. Beginning in September, L&I will review the total corrections issued from June through August and begin working very closely with the 5% of contractors who receive the most corrections per inspection to encourage them to reduce their corrections. L&I's goal is to reduce the corrections per inspection issued to those contractors by 15% by July 1, 2007.

L&I will primarily emphasize outreach and training for the contractors and their electricians, included in the initiative, in reaching the goal. It is L&I's hope that contractors in the target group will take responsibility for their work and be proactive in improving their installations. In July 2007, L&I will repeat this process and raise the goal to 20% improvement during the following year.

## ● IEC Washington State "Apprentice of the Year" Wins National Competition

The Department would like to acknowledge the accomplishments of apprentice Jerrad Krause from Bellingham Washington. Jerrad competed and placed first in the IEC Washington State "Apprentice of the year" competition. He then went on to represent the IEC Washington State chapters and placed first at the national competition earning him the title of IEC "National Apprentice of the Year". The competition lasted three days and consisted of hands-on labs, interviews and written examinations. Congratulations to Jared for a job well done.

## ● Main Breaker Requirement For Temporary Construction Panelboards

NEC 408.34 classifies panelboards, for the purpose of article 408, as either a **lighting and appliance branch-circuit panelboard** or a **power panelboard**. In addition it defines a lighting and appliance branch circuit as a branch circuit that has a connection to the neutral of the panelboard and that has overcurrent protection of 30 amps or less in one or more conductors.

NEC 408.34 defines a lighting and appliance branch circuit panelboard as one having more than 10 percent of its overcurrent devices protecting lighting and appliance branch circuits. A power panelboard is one having 10 percent or fewer of its overcurrent devices protecting lighting and appliance branch circuits. The definition of a lighting and appliance branch circuit is very inclusive and qualifies nearly all common panelboards as a lighting and appliance branch-circuit panelboard. Temporary construction panelboards meet the definition of a lighting and appliance branch circuit panelboard and must have overcurrent protection as required by 408.36.

*NEC 408.36 Each lighting and appliance branch circuit panelboard shall be individually protected on the supply side by not more than two main circuit breakers or two sets of fuses having a combined rating not greater than that of the panelboard.*

A main breaker is required to protect the bussing on a temporary construction panelboard. If a back fed breaker is to be utilized then a retainer clip must be installed. In an attempt to be proactive with the industry the department will allow temporary construction panelboards without main breakers to be installed **until July 1, 2006. After that date all temporary construction panelboards must comply with the full requirements of NEC 408.**

## ● Provisional Electrical Work Labels

Effective November 22, 2004, a provisional electrical work permit label was created to allow the electrical contractor to begin their electrical work immediately and then get the normal electrical permit within two working days. These labels allow a way for a contractor to have a valid permit, especially when performing service or maintenance work where the exact nature of the repair is unknown until the electrician is on the job site. No permit is necessary for Class A permit exempt work. Class B basic electrical work labels may also be used when applicable.

The provisional electrical work permit label is an acceptable substitute for a normal permit for two working days. **It is not mandatory to use a provisional label**, however it serves as an alternative to the normal permit purchasing methods (e.g. Internet, contractor deposit account, phone, FAX) that may not be easily available to the worker in the field making the permit purchasing decision prior to beginning the work.

Only licensed electrical (or telecommunications) contractors can purchase provisional electrical work permits. Provisional electrical work permit labels are sold in blocks of twenty for \$200. Once purchased, they may be divided up between the contractor's service vehicles or personnel. The labels are bright yellow in color to easily differentiate them from the similarly formatted (bright pink) Class B basic electrical work labels. Refunds are not available for provisional electrical work permit labels, and the \$10 individual label cost is not deducted from the normal permit fee. The provisional labels serve for two days as a valid electrical permit. They are not valid in city jurisdictions who perform their own electrical inspections.

If a provisional label is used, the certified electrician or telecommunications worker performing the installation must affix the provisional permit label on the cover of the panelboard, overcurrent device, or telecommunications equipment supplying the circuit or equipment **prior to beginning the work**. The labels must be **completely** filled in using sunlight and weather resistant ink. The contractor portion and job site portion of the label **must include all of the following information**:

DATE OF WORK	SITE ADDRESS, CITY, COUNTY
ELECTRICAL CONTRACTOR'S NAME	SITE OWNER NAME
ELECTRICAL CONTRACTOR'S LICENSE #	DESCRIPTION OF WORK
INSTALLING ELECTRICIAN'S CERTIFICATE #	

The contractor's portion of the label must be returned to the L&I electrical office having jurisdiction for the inspection, within two working days after the job site portion of the label is affixed. Either receipt by L&I or postmark to a valid L&I electrical address is acceptable for meeting this requirement.

## ● Unsupervised HVAC/R Trainees

There is a provision in rule (WAC 296-46B-965(11)) that allows a certified trainee to work without supervision "*when installing HVAC thermostat cable when the system consists of a single thermostat in one- and two-family dwelling units where line voltage power is not connected to the system.*" This specific (and limited) permission was intentionally allowed as a result of compromise by industry representatives drafting the original HVAC/R scope of work in 1998. The unsupervised work was intended to accommodate the needs of the low-cost affordable housing industry and was allowed only because the electrical installation work was minimal and the unsupervised trainee would be exposed to no live electrical conductors in the structure.

At the winter electrical stakeholder meetings, we were asked, "Can trainees work unsupervised when installing thermostat cables on a retrofit of an outside A/C or heat pump unit if that specific equipment has not been energized?" **The answer is no.** WAC 296-46B-965(11) that (HVAC/R) only allows trainees to work unsupervised when installing thermostat cables in a one- and two-family dwelling new construction environment where nothing is energized except a construction temporary service.

## ● Marking Required For HVAC Equipment

**HVAC installers and contractors please take notice.** We want you to have the opportunity to avoid the expense of return trips to make corrections by being aware of all the requirements that apply to your equipment installation or modification. The electrician must do the field marking on the nameplate provided by the manufacturer and identify any electric strip heating modules you have installed or added that are not identified at the factory.

NEC 424.28(A) states, "**Marking Required.** Each unit of fixed electric space-heating equipment shall be provided with a nameplate giving the identifying name and the normal rating in volts and watts or in volts and amperes" and "Electric space-heating equipment intended for use on alternating current only or direct current only shall be marked to so indicate. The marking of equipment consisting of motors over 1/8 hp and other loads shall specify the rating of the motor in volts, amperes, and frequency, and the heating load in volts and watts or in volts and amperes." Many installers are not marking the nameplate for the size of heating elements installed. Part (B) of the article specifies, "**Location.** This nameplate shall be located so as to be visible or easily accessible after installation."

### ● Ampacity Of Type NM Cables Used For Range Or Furnace Circuits

Many contractors and their customers prefer to use copper conductors for all of their building wiring. Some equipment manufacturers still specify "Use Copper Conductors Only" on the equipment or in their installation instructions for branch-circuit wiring terminations.

NEC 334.80 states, "The ampacity of Types NM, NMC, and NMS cable shall be determined in accordance with 310.15. The ampacity shall be in accordance with the 60°C (140°F) conductor temperature rating. The 90°C (194°F) rating shall be permitted to be used for ampacity derating purposes, provided the final derated ampacity does not exceed that for a 60°C (140°F) rated conductor."

A look at the appropriate table (NEC Table 310.16) for this type of conductor makes it clear that the maximum (60°C) ampacity for 8 AWG copper NM cable is **40 amps**. Even though you are permitted to begin derating from the (90°C) 55 amp value, there is little need to derate for conductor fill or ambient temperature in most NM cable range and furnace branch-circuit installations. You are never permitted to exceed the 8 AWG NM cable 40 amp rating.

### ● Concrete Encased Electrode- Materials, Installation and Inspection

Concrete encased electrodes are defined in NEC 250.52(A)(3) as an acceptable electrode permitted for grounding. The electrode must be encased by at least 2 inches of concrete, located within and near the bottom of a concrete foundation or footing that is in direct contact with the earth. In addition the electrode must be at least 20 feet of one or more bare or zinc galvanized or other electrically conductive coated steel reinforcing bars or rods of not less than ½ inch in diameter or consisting of at least 20 feet of bare copper conductor not smaller than 4 AWG.

Typically, a concrete encased electrode system is referred to as a UFER ground system in recognition of the individual that pioneered the effective and inexpensive grounding system. Numerous studies have proved that a properly installed concrete encased electrode system will maintain a resistance of four ohms or less to ground for the life of the foundation.

In order to ensure that the concrete encased electrode is installed properly reinforcing bars or rods encapsulated with non-conductive coating such as epoxy **cannot be used**. The required 20 feet of reinforcing bar or rod is not required to be a continuous piece and is allowed to be joined together by tie wire to satisfy the length requirement. The minimum length of concrete encased electrode is not required to be connected to the rest of the rebar in the footings and walls but is recommended. In addition no vapor barriers or insulating material that effectively isolates the concrete footing or foundation from the earth can be used.

The department will allow two verification methods of a concrete encased electrode installation:

**Method 1: Visual inspection of the electrode.** At the time of inspection of other work on the project, a visual inspection of the exposed (20 ft. minimum) reinforcing steel or of the termination of a copper grounding electrode conductor to the (20 ft.) of reinforcing steel near the bottom of a concrete foundation or footing. (Termination of copper wire to rebar must always be visually inspected whether within or external to the concrete). If a special inspection trip is required to inspect a grounding electrode conductor, a trip fee will be charged for that inspection in addition to the normal permit fee.

**Method 2: Provisions for Continuity Check:** The electrical contractor can provide, at the time of the service inspection, a method so the inspector can verify the resistance of the electrode conductor along its entire length. The department will allow the attaching a length of copper wire to one end of the electrode that reaches the location of the grounding electrode conductor that will enable the inspector to measure the resistance with a standard resistance tester. The concrete encased electrode does not have to be accessible for a visual inspection.

● **Electrical Question of the Month**

**This Month's Question:** A lighting and appliance branch-circuit panelboard is one having more than \_\_\_\_ percent of its overcurrent devices protecting lighting and appliance branch circuits.

A) 5, B) 10, C) 15, D) 20

**Last Month's Question:** All device and junction boxes 6" by 6" or smaller for NEC 700 emergency systems and circuits must be \_\_\_\_\_ in color, both inside and outside.

A) red, B) orange, C) yellow, D) black. The answer is: B) [WAC 296-46B-700(3)].

**Final Judgments of Electrical Laws  
For the 1<sup>st</sup> Quarter of 2006**

Violator	Penalty
<b>Violation – No Electrical Contractor's License</b>	
<b>Region 1 – North Puget Sound</b>	
ABSOLUTE GAS SERVICES, PO BOX, MILL CREEK WA	\$ 500
BENNETT DESIGN PERFORMANCE, PO BOX, MONROE WA	\$ 500
CDM CONSTRUCTORS INC, N.E. 1ST ST, SUITE 201, BELLEVUE WA	\$ 500
COLEMAN SPAS, , REDMOND WA	\$ 500
D & J CONSTRUCTION, FILBERT LN, BURLINGTON WA	\$ 500
EXTREME SECURITY, STATE ROUTE 92, LAKE STEVENS WA	\$ 500
EYE ON SECURITY, NE. 95TH AVE. ST., REDMOND WA	\$ 3000
KITCHENS & DESIGN, E. HICKOX ROAD, MT. VERNON WA	\$ 500
MORRISON HOME INNOVATION LLC, 206TH ST SW, LYNNWOOD WA	\$ 500
OLD WORLD CONST. RESOURCES LLC, 13TH AVE NW, SEATTLE WA	\$ 500
P D R ENTERPRISES, INC., PO BOX, EDMONDS WA	\$ 500
REBAR MACHINE SERVICES INC., EMERALD AVE, LAS VEGAS NV	\$ 500
RELIABLE FLOOR COVERING INC, MAIN STREET, EDMONDS WA	\$ 500
ROMAN TECHNOLOGIES, INC., GARDEN BROOK DRIVE, FARMERS BRANCK TX	\$ 500
<b>Region 2 – King County</b>	
BURIEN NATURAL GAS SERVICE INC., SW 154TH STREET, BURIEN WA	\$ 500
COOK, DANIEL, OLD OWEN RD, MONROE WA	\$ 3000
CORN, KIM, 171ST AVE SE, BELLEVUE WA	\$ 500
CROWN MOBILE HOME SETUP & SERVICES, , OLYMPIA WA	\$ 500
ERICKSEN, MARK, NE 57TH ST, SEATTLE WA	\$ 500
GARDNER, GLENN, N. 40TH ST., SEATTLE WA	\$ 500
GILLILAND, DOYLE, NE 61 ST., REDMOND WA	\$ 500
GRINNELL, TOM, OLD OWEN RD, MONROE WA	\$ 1500
GUSTAFSON, KARL, LOVES HILL RD, SULTAN WA	\$ 500
MAGNUSOHN JR., PATRICK, DELRIDGE WAY SW #B, SEATTLE WA	\$ 500
QAYED, FRANK, SCOTT BLVD., SANTA CLARA CA	\$ 500
REHABITAT NORTHWEST INC., 16TH AVE SW, TUKWILA WA	\$ 500
SEATTLE'S BEST WINDOWS, INDUSTRY DR STE 220, SEATTLE WA	\$ 500
VOLZ, JAY, 225TH PLACE SE, MAPLE VALLEY WA	\$ 500
<b>Region 3 – Pierce &amp; Kitsap County &amp; Olympic Peninsula</b>	
CRAWFORD, ROB, 200TH ST E, GRAHAM WA	\$ 1000
GOODEN, JR., ALLEN, 12TH AVE S #E 202, SEATTLE WA	\$ 500
GREENTREE COMMUNICATIONS CO, PO BOX, SEQUIM WA	\$ 50
H D FOWLER CO, PO BOX, BELLEVUE WA	\$ 500
MUNCE, DERALD, LILA CT, STEILACOOM WA	\$ 500
PAUL, MICHELLE, 15TH AVE S, SEATTLE WA	\$ 500
PERFORMANCE CONTRACTING INC, W 110TH ST, LENEXA KS	\$ 500
ROUSE, KERRY, BORDER WAY NE, KINGSTON WA	\$ 500
SIGNATURE KITCHENS & INTERIORS, SMITH STREET, PORT ORCHARD WA	\$ 500
<b>Region 4 – Southwest Washington</b>	
AMERICAN AIR & ELECTRICAL, NE 68 ST., VANCOUVER WA	\$ 500
CROWN FURNACE, PIONEER BLVD., SANDY OR	\$ 500
FRIEDRICH, DANIEL, PO BOX, OLALLA WA	\$ 500
HCG BUILDING TECHNOLOGIES INC., STEVENS AVE, SOLANA BEACH CA	\$ 500
HOOD RIVER PLUMBING & HEATING, 12TH ST, HOOD RIVER OR	\$ 500
MOUNTAIN VIEW ELECTRIC INC, NW 51ST AVE, RIDGEFIELD WA	\$ 500
PETROVICH, MATTHEW, PO BOX, SHELTON WA	\$ 500
SCHMITZ, STEPHEN, PO BOX, VANCOUVER WA	\$ 500
WYNINGER, RICHARD, PO BOX, HOQUIAM WA	\$ 500
<b>Region 5 – Central Washington</b>	
ALLIANCE CORPORATION, W. COLUMBIA ST., PASCO WA	\$ 500
AVILA, JOSE, SPARROW RD., CONNELL WA	\$ 500
BIG BEARS PLUMBING ROOTER LLC, 71ST ST. NW, GIG HARBOR WA	\$ 500
DAN'S BACKHOE SERVICE, SWANSON GULCH ROAD, MANSON WA	\$ 500
DOOR-TECH INC, N. WENATCHEE AVE., WENATCHEE WA	\$ 500
PREMIER LANDSCAPING/DESIGN INC., PATTYTON LN., RICHLAND WA	\$ 500



**ELECTRICAL CURRENTS****May 2006**

SHORT, WILLIAM, PO BOX, ENTIAT WA	\$	500
SIMPSON, ROB, E. MAIN AVE., PUYALLUP WA	\$	500
TTC CONSTRUCTION LLC, PO BOX , YAKIMA WA	\$	500
<b>Region 6 – Eastern Washington</b>		
AIRE SERV OF SPOKANE, E TRENT AVE, SPOKANE WA	\$	250
ALLEN, ARNOLD, W GARLAND, SPOKANE WA	\$	500
ANCHOR CONSTRUCTION CO, PO BOX, LOON LAKE WA	\$	500
HEMIGHAUS, MARK, BURRELL AVE, LEWISTON ID	\$	500
HUFF, CHARLES, 6TH AVE., LEWISTON ID	\$	500
J & S IRONWORKS, PO BOX, NINE MILE FALLS WA	\$	500
JAMES HENNESSEY CONSTRUCTION, PO BOX, LOON LAKE WA	\$	500
NELSON, JAMES, PO BOX , SPOKANE WA	\$	500
RH EXCAVATION & PUMP, PO BOX, PRIEST RIVER ID	\$	500
RUDEEN DEVELOPMENT LLC, 169TH DRIVE SE #166, MONROE WA	\$	500
SKORICK, RON, N.VINCENT RD, NEWMANLAKE WA	\$	500
<b>Central Office</b>		
BOOTH AND BURNER CORPORATION, PO BOX, LACEY WA	\$	500
CASCADE SIGN & FABRICATION LLC, PLEASANT VALLEY RD, YAKIMA WA	\$	1000
CASTLE HEATING & A/C INC., PO BOX, SOUTH PRAIRIE WA	\$	500
R & H MECHANICAL INC, PORT DRIVE, BURLINGTON WA	\$	1000
ROE, RICK, NE 16TH ST, SAMMAMISH WA	\$	1000
<b>Violation – Hiring Uncertified Electricians</b>		
<b>Region 1 – North Puget Sound</b>		
COLEMAN SPAS, , REDMOND WA	\$	250
KITCHENS & DESIGN, E. HICKOX ROAD, MT. VERNON WA	\$	250
OLD WORLD CONST. RESOURCES LLC, 13TH AVE NW, SEATTLE WA	\$	250
REBAR MACHINE SERVICES INC., EMERALD AVE, LAS VEGAS NV	\$	250
RELIABLE FLOOR COVERING INC, MAIN STREET, EDMONDS WA	\$	250
ROMAN TECHNOLOGIES, INC., GARDEN BROOK DRIVE, FARMERS BRANCK TX	\$	250
SERVICE ELECTRIC CO INC., PO BOX, SNOHOMISH WA	\$	250
WEST COAST ENTERPRISES, 196TH ST. SW., LYNNWOOD WA	\$	250
<b>Region 2 – King County</b>		
AT YOUR SERVICE ELECTRIC, 16TH AV SW, BURIEN WA	\$	250
PUGET SOUND ELECTRICAL SERVICE, 4TH AV S, SEATTLE WA	\$	250
<b>Region 3 – Pierce &amp; Kitsap County &amp; Olympic Peninsula</b>		
AMBIENT CONTROL CO INC, R ST NW, AUBURN WA	\$	250
GREENTREE COMMUNICATIONS CO, PO BOX, SEQUIM WA	\$	50
MCKINLEY ELECTRIC INC., ,	\$	250
PERFORMANCE CONTRACTING INC, W 110TH ST, LENEXA KS	\$	250
PROVIDENT ELECTRIC INC., PO BOX, RENTON WA	\$	500
SECURITY ONE INC., 104TH ST CT S, LAKEWOOD WA	\$	250
SHAMP ELECTRICAL CONTRACTING, INC., W. 8TH ST., PORT ANGELES WA	\$	500
<b>Region 4 – Southwest Washington</b>		
E S & A SIGN & AWNING, OAK PATCH RD., EUGENE OR	\$	500
GENESIS HOME TECH INC, SW NIMBUS AVE 4A, BEAVERTON OR	\$	250
GODVIN, JOEL, NW 160 CT, BEAVERTON OR	\$	1000
HUSER INTEGRATED TECH INC., NW 17TH AVE, PORTLAND OR	\$	250
PROTEC INC, NE FLANDERS, PORTLAND OR	\$	250
QUALITY ELECTRIC, NE 82ND AVE, VANCOUVER WA	\$	500
STATE OF WASHINGTON DEPARTMENT OF CORRECTION, LINDERSON WAY, OLYMPIA WA	\$	250
<b>Region 5 – Central Washington</b>		
ALLIANCE CORPORATION, W. COLUMBIA ST., PASCO WA	\$	250
DOOR-TECH INC, N. WENATCHEE AVE., WENATCHEE WA	\$	250
NEPPLE ELECT & CONTROLS LLC, PENINSULA DRIVE, MOSES LAKE WA	\$	250
STEREO FIRST BY BEMIS, S 1 ST ST, YAKIMA WA	\$	250
TTC CONSTRUCTION LLC, PO BOX, YAKIMA WA	\$	250
<b>Region 6 -</b>		
ADVANCED ELECTRIC & ALARM SYS INC, PO BOX, SPOKANE WA	\$	500
ARCTIC LIGHTING & ELECTRIC, E SHARP, SPOKANE WA	\$	750
LOWE'S BUILT - IN SYSTEMS INC, E MONTGOMERY, SPOKANE WA	\$	500
PRO HEATING & A/C INC, PO BOX, SPOKANE WA	\$	250
RUDEEN DEVELOPMENT LLC, 169TH DRIVE SE #166, MONROE WA	\$	250
SCHRODER, RAY, E ARCHERY, SPOKANE WA	\$	250
<b>Central Office</b>		
CASCADE SIGN & FABRICATION LLC, PLEASANT VALLEY RD, YAKIMA WA	\$	100
CERTIFIED SECURITY SYSTEMS/DBA SPOKANE SECURITY SYSTEMS INC., N PINES RD, SPOKANE WA	\$	100
GARRETT SIGN CO. INC., HARNEY ST, VANCOUVER WA	\$	100
LEIBOLD COMMUNICATIONS INC., ELLIOTT AVE W, SEATTLE WA	\$	250
PROVIDENT ELECTRIC INC., PO BOX, RENTON WA	\$	500
WIRE RITE ELECTRIC INC., PO BOX, BATTLE GROUND WA	\$	300
<b>Violation – Uncertified Electrician</b>		
<b>Region 1 – North Puget Sound</b>		

**ELECTRICAL CURRENTS****May 2006**

BENNETT, GREG, PO BOX, MONROE WA	\$	250
BENNETT, MARK, 76TH DR.N.E., MARYSVILLE WA	\$	250
DAWSON, STEPHEN, 13TH AVE NW, SEATTLE WA	\$	250
DYER, ROBERT, NE. 95TH ST., REDMOND WA	\$	250
FAKHRI, ALEX, , KIRKLAND WA	\$	250
GAULKE, BRENT, NE 12TH ST, BELLEVUE WA	\$	250
GREINKE, JEFF, PO BOX, MILL CREEK WA	\$	250
MALMBERG, JONATHAN, N.E. 1ST ST, SUITE 201, BELLEVUE WA	\$	250
MARCHEWKA, WALDEMAR, 30TH DR SE, BOTHELL WA	\$	250
O'NEAL, GREG, EMERALD AVE, LAS VEGAS NV	\$	250
PIPER, KEN, E. HICKOX ROAD, MT. VERNON WA	\$	250
REINERT, MITCHELL, NE 172ND LN, WOODINVILLE WA	\$	250
SMITH, DARRELL, FILBERT, BURLINGTON WA	\$	250
TAYLOR, CHARLES, PO BOX, UNION WA	\$	250
<b>Region 2 – King County</b>		
BRIMER, CHARLES, S. THOMPSON AVE., TACOMA WA	\$	250
COOK, DANIEL, OLD OWEN RD, MONROE WA	\$	500
GRINNELL, TOM, OLD OWEN RD, MONROE WA	\$	500
<b>Region 3 – Pierce &amp; Kitsap County &amp; Olympic Peninsula</b>		
BROWN, RODNEY, PIKE ST NE, AUBURN WA	\$	250
BYRD, DENNIS, DOVE LN NE, OLYMPIA WA	\$	250
JOHNSON, PETER, SMITH STREET, PORT ORCHARD WA	\$	250
KNEELAND, ROBERT, THUJA AVE.SE, YELM WA	\$	250
MACDOWELL, WARREN, PO BOX, SEQIM WA	\$	50
MATKINS, KEITH, W SWANEY AVE, PORT HADLOCK WA	\$	250
PALMER, CHRIS, PO BOX, SEQUIM WA	\$	50
PRATT, DAVE, PO BOX, SEQUIM WA	\$	50
STABILE, BILL, ROOSEVELT ST., PORT TOWNSEND WA	\$	250
WALKER, TONY, FRESHWATER PARK, PORT ANGELES WA	\$	250
YOUNG, TRACY, WEIHL RD, CLE ELLUM WA	\$	250
<b>Region 4 – Southwest Washington</b>		
BIGG JR., FRANK, SAINT ANDREWS CRT., OREGON CITY OR	\$	250
CLAUSEN, GARRY, LIBERTY ST NE, AURORA OR	\$	250
CORNER, JAMES, 22ND AVE NW, SALEM OR	\$	250
DUNBAR, SCOTT, NE 42ND ST, VANCOUVER WA	\$	250
FRIEDRICH, DANIEL, PO BOX, OLALLA WA	\$	250
HILL, VIRGIL, NW 199TH STREET, BATTLE GROUND WA	\$	250
MANZURA ELECTRIC, NE 61ST PL, VANCOUVER WA	\$	250
ORTWEIN, MICHAEL, PO BOX , JASPER OR	\$	250
PETROVICH, MATTHEW, PO BOX , SHELTON WA	\$	250
WYNINGER, RICHARD, PO BOX, HOQUIAM WA	\$	250
<b>Region 5 – Central Washington</b>		
ALEXANDER, BRADLEY, ASPEN WAY DRIVE, HELENA MT	\$	250
AVILA, JOSE, SPARROW RD., CONNELL WA	\$	250
BROWN, DALUS, S. 64 TH. AVE., YAKIMA WA	\$	250
HENDRICKS, BLAKE, WEST IVY, MOSES LAKE WA	\$	250
JEFFERSON, HARRY, MC LAUGHLIN, YAKIMA WA	\$	250
LENBERG, DONALD, MIERAS RD, YAKIMA WA	\$	250
MATSURMA, RON, S 1 ST ST, YAKIMA WA	\$	250
RANSIER III, ROBERT, C STANTON RD, YAKIMA WA	\$	250
SIMPSON, ROB, E. MAIN AVE., PUYALLUP WA	\$	250
WALKER, LEON, ELLA NE., EAST WENATCHEE WA	\$	250
YARBROUGH, GARY, W. HENRY, PASCO WA	\$	250
<b>Region 6 – Eastern Washington</b>		
ABERASTURI, RANDY, N CONKLEN, ELK WA	\$	500
ALLEN, ARNOLD, W GARLAND, SPOKANE WA	\$	250
FOSTER, CLINT, PO BOX, DAVENPORT WA	\$	250
HADDORFF, SCOTT, E. 53RD, SPOKANE WA	\$	250
HEMIGHAUS, MARK, BURRELL AVE, LEWISTON ID	\$	250
HUFF, CHARLES, 6TH AVE., LEWISTON ID	\$	250
LABERE, JOHN, PO BOX, NINE MILE FALLS WA	\$	250
NEIHART, RYAN, 169TH DRIVE SE #166, MONROE WA	\$	250
PHILLIPS, REX, N. ADAMS RD., SPOKANE VALLEY WA	\$	250
RICHARDS, DAVID, S MCDONALD, SPOKANE WA	\$	250
SCHRODER, RAY, E ARCHERY, SPOKANE WA	\$	250
SMELCER, RONALD, N PERRY, SPOKANE WA	\$	250
STONEHOCKER, ROBERT, E. ARCHERY AVE., SPOKANE WA	\$	250
URIBE, TIM, PO BOX, LOON LAKE WA	\$	250
<b>Central Office</b>		
JORDAN, PATRICK, NE 179TH ST # 46, WOODINVILLE WA	\$	350
MEARS, FRED, PO BOX, YAKIMA WA	\$	100
OLSON, CHADD, N PARK RD, SPOKANE WA	\$	250
WADDLES, JOHNNIE, 96TH AVENUE E., EATONVILLE WA	\$	250
<b>Violation – No Electrical Work Permit</b>		

## ELECTRICAL CURRENTS

May 2006

### Region 1 – North Puget Sound

ABSOLUTE GAS SERVICES, PO BOX, MILL CREEK WA	\$ 250
ACERO, JORGE, PO BOX, GRANITE FALLS WA	\$ 250
ANCHOR ELECTRIC, 8TH PL. W., LYNNWOOD WA	\$ 250
ASSOCIATED HEATING & SHEET METAL INC, PO BOX, MONROE WA	\$ 2000
AVENUE B HOLDINGS, LLC, PO BOX , SNOHOMISH WA	\$ 250
BARTLETT ELECTRIC, SANDY HOOK DR., CLINTON WA	\$ 1000
BENNETT DESIGN PERFORMANCE, PO BOX, MONROE WA	\$ 250
C & L HOLDINGS, LLC, MERIDIAN, BELLINGHAM WA	\$ 250
C M HEATING INC, PO BOX, MOUNTLAKE TERRACE WA	\$ 250
CASCADE FUEL OIL DIST CO, HIAWATHA PL S, SEATTLE WA	\$ 250
CDM CONSTRUCTORS INC., NE 1ST ST SUITE 201, BELLEVUE WA	\$ 250
COLEMAN SPAS, , REDMOND WA	\$ 250
DAVIS, SHIRLEY, NE 151ST ST., LAKE FOREST PARK WA	\$ 250
EYE ON SECURITY, NE. 95TH AVE. ST., REDMOND WA	\$ 250
FREDSON, STEVE, 82ND PL. NE, MARYSVILLE WA	\$ 250
GREENWOOD ELECTRIC INC., PO BOX, SEATTLE WA	\$ 250
GSB ELECTRIC INC., 80TH AVE. NW, STANWOOD WA	\$ 250
HAMMER ELECTRIC, 96TH DR SE, SNOHOMISH WA	\$ 250
HD ELECTRIC, PO BOX, EVERETT WA	\$ 250
JOHNSON, LARRY, OLD CASCADE HWY, SKYKOMISH WA	\$ 250
KITCHENS & DESIGN, E. HICKOX ROAD, MT. VERNON WA	\$ 250
L E A, AURORA AVE. N PMB 6611, SEATTLE WA	\$ 2000
LIGHTNING ELECTRIC, RATHBONE RD. STE C, FERNDALE WA	\$ 250
MAJOR ELECTRIC INC., 142ND AVE NE, WOODINVILLE WA	\$ 250
MCCOMBS LIGHT & ELECTRIC CO., PO BOX, EASTSOUND WA	\$ 250
MENNE, JAMES, SHELL ST, GREENBANK WA	\$ 250
MORRISON HOME INNOVATION LLC, 206TH ST SW, LYNNWOOD WA	\$ 1000
NORTH PARK HEATING INC, BALLINGER WAY NE, SEATTLE WA	\$ 2000
NORTHWEST ELECTRIC AND SERVICE INC., 29TH ST E, EDGEWOOD WA	\$ 2000
OLD WORLD CONST. RESOURCES LLC, 13TH AVE NW, SEATTLE WA	\$ 250
ORCAS ELECTRIC INC, LANGELL LANE, EASTSOUND WA	\$ 250
P D R ENTERPRISES, INC., PO BOX, EDMONDS WA	\$ 250
PRECISION ELECTRICAL OF WA INC, PO BOX, BATTLE GROUND WA	\$ 250
QUALITY ONE LANDSCAPING & IRRIGATION, 209TH AVE SE, MONROE WA	\$ 250
REBAR MACHINE SERVICES INC., EMERALD AVE, LAS VEGAS NV	\$ 250
RELIABLE FLOOR COVERING INC, MAIN STREET, EDMONDS WA	\$ 250
ROMAN TECHNOLOGIES, INC., GARDEN BROOK DRIVE, FARMERS BRANCK TX	\$ 250
SERVICE ELECTRIC CO INC., PO BOX, SNOHOMISH WA	\$ 1000
SIVERLING, DAN, 78TH PL SW, EDMONDS WA	\$ 250
SMITH, MYRON, 267TH DR SE, MONROE WA	\$ 250
SPENCER, MARK, 69TH AVE NE, MARYSVILLE WA	\$ 250
WEST COAST ENTERPRISES, 196TH ST. SW., LYNNWOOD WA	\$ 250

### Region 2 – King County

BURIEN NATURAL GAS SERVICE INC., SW 154TH STREET, BURIEN WA	\$ 1000
COOK, DANIEL, OLD OWEN RD, MONROE WA	\$ 250
CROWN MOBILE HOMES SET-UP/SVC, RICH ROAD SE, OLYMPIA WA	\$ 250
DICK'S HEATING & A/C INC., 45TH ST. E, SUMNER WA	\$ 1000
GLOBAL SCTY & COMM OF WA INC, MAIN ST, VANCOUVER WA	\$ 1000
GRINNELL, TOM, OLD OWEN RD, MONROE WA	\$ 250
HARBOR ELECTRIC INC, SHOREWOOD CT, FOX ISLAND WA	\$ 250
JACK IN THE BOX, A ST SE, AUBURN WA	\$ 250
KEITHLY ELECTRIC CO, SOUTH DIRECTOR, SEATTLE WA	\$ 2000
KOZLOV, VASILYI, AVE. S, AUBURN WA	\$ 250
M C CONSTRUCTION, SW 102ND STEET #71, SEATTLE WA	\$ 250
R F I COMM & SECURITY SYS, SW 112TH ST, BEAVERTON OR	\$ 1000
REHABITAT NORTHWEST INC, 16TH AVE SW, SEATTLE WA	\$ 250
SEATTLE'S BEST WINDOWS, INDUSTRY DR STE 220, SEATTLE WA	\$ 250
SECURITY ONE INC, 104TH ST. CT S, LAKEWOOD WA	\$ 250
THE LOCK SHOP, PACIFIC HIGHWAY S, FEDERALWAY WA	\$ 1000
UNIVERSAL REFRIGERATION INC, PO BOX, AUBURN WA	\$ 1000

### Region 3 – Pierce & Kitsap County & Olympic Peninsula

ABSOLUTE AIR INC, E HWY 101, PT ANGELES WA	\$ 250
HOLMES, RAY, 52ND AVE W, LAKEWOOD WA	\$ 250
JENSEN, CARLTON, STATE HWY. 305 N. E., POULSBO WA	\$ 250
OAK BAY ANIMAL HOSPITAL, OAK BAY RD, PT HADLOCK WA	\$ 250
PUGET SOUND SERVICES, 44TH AVE SW, SEATTLE WA	\$ 250
SAME DAY ELECTRIC, 72ND AVE NW, GIG HARBOR WA	\$ 250
SIGNATURE KITCHENS & INTERIORS, SMITH STREET, PORT ORCHARD WA	\$ 250
TOOLEY, SAM, ORCHARD ST. S.E., AUBURN WA	\$ 250
VALLEY ELEC CO OF MTVERNON INC, MERRILL CREEK PARKWAY, EVERETT WA	\$ 1000
YOUNG, TRACY, WEIHL RD, CLE ELLUM WA	\$ 250

### Region 4 – Southwest Washington

ALOHA ELECTRIC INC, PATTERSON PL., VANCOUVER WA	\$ 100
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**ELECTRICAL CURRENTS****May 2006**

FIVE STAR ELECTRIC, S J ST, TACOMA WA	\$	500
HAMER ELECTRIC, INDUSTRIAL WAY, LONGVIEW WA	\$	250
HUSER INTEGRATED TECH INC., NW 17TH AVE, PORTLAND OR	\$	250
J C ELECTRIC INC, NW 184TH, RIDGEFIELD WA	\$	250
KUTSAR, VIKTOR, NE 107TH AVE, VANCOUVER WA	\$	250
LANG, MIKE, PO BOX, MONTESANO WA	\$	250
MILLENNIUM ELECTRIC, NW 9TH CIRCLE, CAMAS WA	\$	2000
MITCHELL, KEITH, NE 212 AVE., BATTLE GROUND WA	\$	250
MOUNTAIN VIEW ELECTRIC INC, NW 51ST AVE, RIDGEFIELD WA	\$	250
NATTA, JIM, NE 182 AVE, BRUSH PRAIRIE WA	\$	250
O'MALLEY, KAREN, PO BOX, VANCOUVER WA	\$	250
QUALITY ELECTRIC, NE 82ND AVE, VANCOUVER WA	\$	250
R J ASHTON ELECTRIC, PO BOX , VANCOUVER WA	\$	1000
SECURITY SIGNS INC, SE HOLGATE BLVD, PORTLAND OR	\$	250
STATE OF WASHINGTON DEPARTMENT OF CORRECTION, LINDERSON WAY, OLYMPIA WA	\$	250

**Region 5 – Central Washington**

ALL-PHASE ELECTRIC, N. 6TH AVE, YAKIMA WA	\$	250
AUST CONSTRUCTION & ELECT LLC, W. 15TH PLACE, KENNEWICK WA	\$	1000
CABIN CREEK ELECT LLC, PO BOX, EASTON WA	\$	250
CENTRAL MECHANICAL SERVICES, PO BOX, YAKIMA WA	\$	1000
CLARK ELECTRIC INC., PO BOX, PASCO WA	\$	250
INLAND ALARM LLC, AHTANUM ROAD, YAKIMA WA	\$	250
KARI-LANE, LLC, PO BOX, SAGINAW AL	\$	250
LIBERTY CHRISTIAN SCHOOL, WILLIAMS BLVD., RICHLAND WA	\$	250
MICHAELS ELECTRIC, HOISINGTON RD., PROSSER WA	\$	500
PREMIER LANDSCAPING/DESIGN INC., PATTYTON LN., RICHLAND WA	\$	250
SIMPSON, ROB, E. MAIN AVE., PUYALLUP WA	\$	250
STEREO FIRST BY BEMIS, S 1ST ST, YAKIMA WA	\$	250
TORRES, EMERITA, JANET ST, PASCO WA	\$	250
TTC CONSTRUCTION LLC, PO BOX, YAKIMA WA	\$	250
WATTS BROTHERS, PO BOX, PATERSON WA	\$	250

**Region 6 – Eastern Washington**

A & M QUALITY HEATING INC, E INDIANA AVE, SPOKANE WA	\$	250
AIRE SERV OF SPOKANE, E TRENT AVE, SPOKANE WA	\$	125
ALLSTATE ELECTRIC INC, 61ST AVE NE #4, ARLINGTON WA	\$	1000
DEHAMER, GREGORY, BLACKBERRY, CHENEY WA	\$	250
HOLLIDAY HEATING & REFRIG INC., N HELENA, SPOKANE WA	\$	250
HUFF, CHARLES, 6TH AVE., LEWISTON ID	\$	250
JAMES HENNESSEY CONSTRUCTION, PO BOX, LOON LAKE WA	\$	250
LOWES BUILT-IN SYSTEMS INC, E MONTGOMERY, SPOKANE WA	\$	500
M CLARK ELECTRICAL LLC, GREGGS RD, NEWPORT WA	\$	1000
MCCABE, MARK, S FAIRWAY RIDGE, SPOKANE WA	\$	250
RAINBOW ELECTRIC INC., N NAPA, SPOKANE WA	\$	2000
STEVE SHERIDAN ELECTRIC, W TEAL AVE, SPOKANE WA	\$	250
TRI-PURE WATER RESOURCES, INC., N. ADAMS RD., SPOKANE VALLEY WA	\$	250
WYTEK CONTROLS INC., PO BOX, TULATATIN OR	\$	250